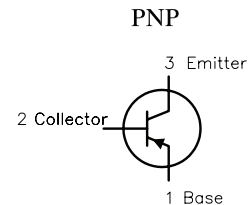
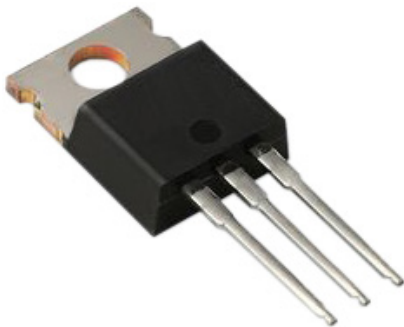


# General Purpose Power Transistor



RoHS  
Compliant



## Description:

Plastic, PNP, TO-220 power transistor General purpose amplifier and switching applications

## Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Collector-Emitter Voltage	$V_{CEO}$	100	V
Collector-Base Voltage	$V_{CBO}$	115	
Emitter-Base Voltage	$V_{EBO}$	5	
Continuous Collector Current	$I_C$	2	A
Base Current = $I_B$ Total Device Dissipation at $T_c = +25^\circ\text{C}$ Derate above $+25^\circ\text{C} = 0.24\text{mW}/^\circ\text{C}$	$P_D$	36	W
Operating and Storage Junction Temperature Range	$T_j, T_{stg}$	-65 to +150	$^\circ\text{C}$

## Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
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### OFF Characteristics

Collector - Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=30\text{mA}, I_B=0$ Note 1	100	-	V
Collector - Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=1\text{mA}, I_E=0$	115	-	V
Emitter - Base Breakdown Voltage	$V_{(BR)EBO}$	$I_C=1\text{mA}, I_E=0$	5	-	V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=60\text{V}, I_B=0$	-	0.2	mA
	$I_{CES}$	$V_{CE}=100\text{V}, V_{BE}=0$	-	0.3	
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=5\text{V}, I_C=0$	-	1	

# General Purpose Power Transistor



## Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

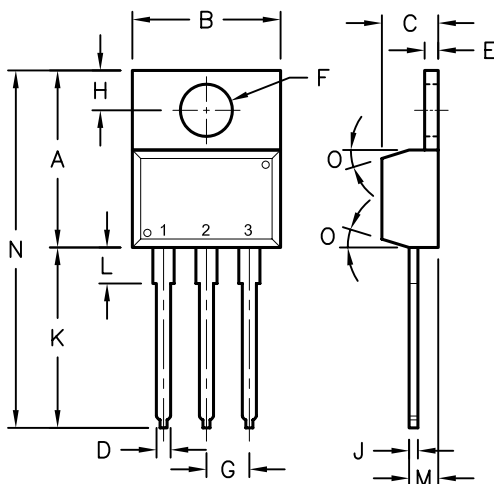
### ON Characteristics (Note 1)

DC Current Gain	$h_{FE}$	$V_{CE}=4\text{V}, I_C=0.2\text{A}$	15	-	-
		$V_{CE}=4\text{V}, I_C=1\text{A}$	40	-	-
Collector - Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1\text{A}, I_B=0.2\text{A}$	-	0.7	V
Base - Emitter On Voltage	$V_{BE(on)}$	$I_C=1\text{A}, V_{CE}=4\text{V}$		1.3	

### Small-Signal Characteristics

Current Gain-Bandwidth Product	$f_T$	$V_{CE}=10\text{V}, I_C=0.2\text{A}, f=1\text{MHz}$	3	-	MHz
Small-Signal Current Gain	$h_{fe}$	$V_{CE}=10\text{V}, I_C=0.2\text{A}, f=1\text{MHz}$	20	-	-

Note 1. Pulse Test: Pulse Width  $\leq 300\mu\text{s}$ , Duty Cycle  $\leq 2\%$ .



Dimensions	Min.	Max.
A	14.42	16.51
B	9.63	10.67
C	3.56	4.83
D	-	0.9
E	1.15	1.4
F	3.75	3.88
G	2.29	2.79
H	2.54	3.43
J	-	0.56
K	12.7	14.73
L	2.8	4.07
M	2.03	2.92
N	-	31.24
O	7°	

Dimensions : Millimetres

### Pin Configuration:

1. Base
2. Collector
3. Emitter

### Part Number Table

Description	Part Number
Transistor, Plastic, PNP, 2A, 100V, TO-220	BD240C

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